

Attachment  
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Attorney Docket No. S2-US4 8325-0002.01

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Attorney Docket No. S2-US4 (SABI-001/03US)	U.S. Serial No. 09/897,844
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Applicant: COX III et al.

**Filing Date: July 2, 2001**

Group Art Unit 1631

Examiner: J.BRUSCA

## U.S. PATENTS

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Ex'r Initials	Ref No.	Document No.	Published	Country	Class	Subclass	Translation
<i>AB</i>	B-1	WO 92/02536	February 20, 1992	PCT			YES NO

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Date: 21 August 2003

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Art Unit: 1631

Filed: July 2, 2001

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Title: REGULATION OF ENDOGENOUS GENE EXPRESSION IN CELLS USING ZINC FINGER PROTEINS

U.S. PATENT DOCUMENTS

Exam. Init.	Ref. Desig.	Document No.	Date	Name	Class	Sub Class	Filing Date
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✓	AB-1	5,096,814	March 17, 1992	Aivasidis et al.	—	—	
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Exam. Init.	Ref. Desig.	Description
<i>JB</i>	CV-1	Cheng et al., "A Single Amino Acid Substitution in Zinc Finger 2 of Adrlp Changes its Binding Specificity at two Positions in UAS1," <i>J. Mol. Biol.</i> <u>251</u> :1-8 (1995)
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Title: REGULATION OF ENDOGENOUS GENE EXPRESSION IN CELLS USING ZINC FINGER PROTEINS

Exam. Init.	Ref. Desig.	Description
<i>JB</i>	DH-1	Corbi et al., "Synthesis of a New Zinc Finger Peptide: Comparison of Its "Cod" Deduced and CASTing Derived Binding Sites," <i>FEBS Letters</i> 417:71-74 (1997)
<i>JB</i>	DI-1	Crozier et al., "Single Amino Acid Exchanges in Separate Domains of the Drosophila Serendipity $\delta$ Zinc Finger Protein Cause Embryonic and Sex Biased Lethality," <i>Genetics</i> 131:905-916 (1992)
	DJ-1	Debs et al., Regulation of Gene Expression in Vivo by Liposome-Mediated Delivery of a Purified Transcription Factor," <i>J. Biological Chemistry</i> 265(18):10189-10192 (1990)
	DK-1	Desjarlais et al., "Redesigning the DNA-Binding Specificity of a Zinc Finger Protein: A Data Base-Guided Approach," <i>Proteins: Structure, Function, and Genetics</i> 12(2):101-104 (1992)
	DL-1	Desjarlais et al., "Redesigning the DNA-Binding Specificity of a Zinc Finger Protein: A Data Base-Guided Approach," <i>Proteins: Structure, Function, and Genetics</i> 13(3):272 (1992)
	DM-1	Desjarlais, J. R. and Berg, J.M., "Length-Encoded Multiplex binding Site Determination: Application to Zinc Finger Proteins," <i>Proc. Natl. Acad. Sci. U.S.A.</i> 91:11099-11103 (1994)
	DN-1	Desjarlais, J. R. and Berg, J.M., "Use of a Zinc-Finger Consensus Sequence Framework and Specificity Rules to Design Specific DNA Binding Proteins," <i>Proc. Natl. Acad. Sci. U.S.A.</i> 90:2256-2260 (1993)
	DO-1	Desjarlais, J. R. and Berg, J.M., "Toward Rules Relating Zinc Finger Protein-Sequences and DNA Binding Preferences," <i>Proc. Natl. Acad. Sci. U.S.A.</i> 90:7345-4349 (1992)
	DP-1	Dibello et al., "The Drosophila Broad-Complex Encodes a Family of Related Proteins Containing Zinc Fingers," <i>Genetics</i> 129:385-397 (1991)
<i>JB</i>	DQ-1	Elrod-Erickson et al., "High-Resolution Structures of Variant Zif268-DNA Complexes: Implications for Understanding Zinc Finger-DNA Recognition," <i>Structure</i> 6(4):451-464 (1998)

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*J.S. Brusca*

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In the Application of G.N. COX III et al.,

Serial No.: 09/897,844

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Title: REGULATION OF ENDOGENOUS GENE EXPRESSION IN CELLS USING ZINC FINGER PROTEINS

Exam. Init.	Ref. Desig.	Description
<i>AB</i>	DR-1	Elrod-Erickson et al., "Zif268 Protein-DNA Complex Refined at 1.6 Å: a Model System for Understanding Zinc Finger-DNA Interactions," <i>Structure</i> 4(10):1171-1180 (1996)
<i>AB</i>	DS-1	Fairall et al., "The Crystal Structure of a Two Zinc-Finger Peptide Reveals an Extension to the Rules for Zinc-Finger /DNA Recognition," <i>Nature</i> 366:483-487 (1993)
	DT-1	Frankel et al., "Fingering Too Many Proteins," <i>Cell</i> 53:675 (1988)
	DU-1	Frankel et al., "Fingering Too Many Proteins," <i>Cell</i> 53:675 (1988)
	DV-1	Friesen et al., "Phage Display of RNA Binding Zinc Fingers from Transcription Factor IIA*," <i>J. Biological Chem.</i> 272(17):10994-10997 (1997)
	DW-1	Friesen et al., "Specific RNA Binding Proteins Constructed from Zinc Fingers," <i>Nature Structural Biology</i> 5(7):543-546 (1998)
	DX-1	Gillemans et al., "Altered DNA binding Specificity Mutants of EKLF and Spl Show that EKLF is an Activator of the b-Globin Locus Control Region <i>in vivo</i> ," <i>Genes and Development</i> 12:2863-2873 (1998)
	DY-1	Gogos et al., "Recognition of Diverse Sequences by Class I Zinc Fingers: Asymmetries and Indirect Effects on Specificity in the Interaction Between CF2II and A + T-Rich Sequences Elements," <i>PNAS</i> 93(5):2159-2164 (1996)
	DZ-1	Gossen et al., "Tight Control of Gene Expression in Mammalian Cells by Tetracycline-Responsive Promoter," <i>PNAS</i> 89:5547-5551 (1992)
	EA-1	Greisman & Pabo, "A General Strategy for Selecting High-Affinity Zinc Finger Proteins for Diverse DNA Target Sites," <i>Science</i> 275:657-661 (1997)
	EB-1	Hamilton et al., "Comparison of the DNA Binding Characteristics of the Related Zinc Finger Proteins WT1 and EGR1," <i>Biochemistry</i> 37:2015-2058 (1998)
<i>AB</i>	EC-1	Hamilton et al., "High Affinity Binding Sites for the Wilms' Tumor Suppressor Protein WT1," <i>Nuc. Acids. Res.</i> 23(2):277-284 (1995)

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*Jill Bruser*

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<i>RB</i>	ED-1	Hanas et al., "Internal Deletion Mutants of <i>Xenopus</i> Transcription Factor IIIA," <i>Nuc. Acids. Res.</i> <u>17</u> (23):9861-9870 (1989)
	EE-1	Hayes et al., "Locations of Contacts Between Individual Zinc Fingers <i>Xenopus laevis</i> Transcription Factor IIIA and the Internal Control Region of a 5S RNA Gene," <i>Biochemistry</i> <u>31</u> :11600-11605 (1992)
	EF-1	Heinzel et al., "A Complex containing N-CoR, MSin3 and Histone Deacetylyse Mediates Transcriptional Repression," <i>Nature</i> <u>387</u> :43-48 (1997)
	EG-1	Hirst et al., "Discrimination of DNA Response Elements for Thyroid Hormone and Estrogen is Dependent on Dimerization of Receptor DNA Binding Domains," <i>PNAS</i> <u>89</u> :5527-5531 (1992)
	EH-1	Hoffman et al., "Structures of DNA-Binding Mutant Zinc Finger Domains: Implications for DNA Binding," <i>Protein Science</i> <u>2</u> :951-965 (1993)
	EI-1	Imhof et al., "Transcriptional Regulation of the AP-Zalpha Promoter by BTEB-1 and AP-ZREP, a Novel WT-1/EGR-Related Zinc Finger Repressor," <i>Molecular and Cellular Biology</i> <u>19</u> (1):194-204 (1999)
	EJ-1	Isalan et al., "Synergy Between Adjacent Zinc Fingers in Sequence-Specific DNA Recognition," <i>PNAS</i> <u>94</u> (11):5617-5621 (1997)
	EK-1	Isalan et al., "Comprehensive DNA Recognition Through Concerted Interactions from Adjacent Zinc Fingers," <i>Biochemistry</i> <u>37</u> :12026-12033 (1998)
	EL-1	Jacobs, G.H., "Determination of the Base Recognition Positions of Zinc Fingers From Sequence Analysis," <i>EMBO J.</i> <u>11</u> (12):4507-4517 (1992)
	EM-1	Jamieson et al. "A Zinc Finger Directory for High-Affinity DNA Recognition," <i>PNAS</i> <u>93</u> :12834-12839 (1996)
<i>V</i>	EN-1	Jamieson et al., "In Vitro Selection of Zinc Fingers with Altered DNA-Binding Specificity," <i>Biochemistry</i> <u>33</u> :5689-5695 (1994)

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<i>BB</i>	EO-1	Julian et al., "Replacement of His23 by Cys in a Zinc Finger of HIV-1NCp7 Led to a Change in 1H NMR-Derived 3D Structure and to a Loss of Biological Activity," <i>FEBS Letters</i> <u>331</u> (1,2):43-48 (1993)
<i>W</i>	EP-1	Kamiuchi et al., "New Multi Zinc Finger Protein: Biosynthetic Design and Characteristics of DNA Recognition," <i>Nucleic Acids Symposium Series</i> <u>37</u> :153-154 (1997)
	EQ-1	Kang et al., "Zinc Finger Proteins as Designer Transcription Factors, <i>J. Biol. Chem.</i> <u>275</u> (12):8742-8748 (2000)
	ER-1	Kim et al., "Serine at Position 2 in the DNA Recognition Helix of a Cys2-His2 Zinc Finger Peptide is Not, in General, Responsible for Base Recognition," <i>J. Mol. Biol.</i> <u>252</u> :1-5 (1995)
	ES-1	Kim et al., "Site-Specific Cleavage of DNA-RNA Hybrids by Zinc Finger/FokI Cleavage Domain Fusions," <i>Gene</i> <u>203</u> :43-49 (1997)
	ET-1	Kim et al., "A 2.2 Å Resolution Crystal Structure of a Designed Zinc Finger Protein Bound to DNA," <i>Nat. Struct. Biol.</i> <u>3</u> (11):940-945 (1996)
	EU-1	Kim et al., "Design of TATA Box-Binding Protein/Zinc Finger Fusions for Targeted Regulation of Gene Expression," <i>PNAS</i> <u>94</u> :3616-3620 (1997)
	EV-1	Kim et al., "Hybrid Restriction Enzymes: Zinc Finger Fusions Fok I Cleavage Domain," <i>PNAS</i> <u>93</u> :1156-1160 (1996)
	EW-1	Kim, J.S. and Pabo, C.O., "Getting a Handhold on DNA: Design of Poly-Zinc finger Proteins with Femtomolar Dissociation Constants," <i>Proc. Natl. Acad. Sci. U.S.A.</i> <u>95</u> :2812-2817 (1998)
	EX-1	Kim, J.S. and Pabo, C.O., "Transcriptional Repression by Zinc Finger Peptides," <i>The Journal of Biological Chemistry</i> <u>272</u> :29795-28000 (1997)
<i>W</i>	EY-1	Kinzler et al., "The GLI Gene is Member of the Kruppel Family of Zinc Finger Proteins," <i>Nature</i> <u>332</u> :371-374 (1988)

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<i>R/B</i>	EZ-1	Kirwacki et al., "Sequence-Specific Recognition of DNA Zinc-Finger Peptides Derived From the Transcription Factor Sp1," <i>Proc. Natl. Acad. Sci. U.S.A.</i> <u>89</u> :9859-9763 (1992)
	FA-1	Klug, A., "Gene Regulatory Proteins and Their Interaction with DNA," <i>Ann. NY Acad. Sci.</i> <u>758</u> :143-160 (1995)
	FB-1	Klug et al., "Protein Motifs 5: Zinc Fingers," <i>FASEB J.</i> <u>9</u> :597-604 (1995)
	FC-1	Klug, "Zinc Finger Peptides for the Regulation of Gene Expression," <i>J. Mol. Biol.</i> <u>293</u> :215-218 (1999)
	FD-1	Kothekar, "Computer Simulation of Zinc Finger Month from Cellular Nucleic Acid Binding Proteins and Their Interaction with Consensus DNA Sequences," <i>FEB Letters</i> <u>274</u> (1,2):217-222 (1990)
	FE-1	Kulda et al., "The Regulatory Gene <i>areA</i> Mediating Nitrogen Metabolite R in <i>Aspergillus nidulans</i> Mutations Affecting Specificity of Gene Activation Alter a Loop Residue of Putative Zinc Finger," <i>EMBO J.</i> <u>9</u> (5):1355-1364 (1990)
	FF-1	Laird-Offringa et al., "RNA-Binding Proteins Tamed," <i>Nat. Structural Biol.</i> <u>5</u> (8):665-668 (1998)
	FG-1	Liu et al., "Regulation of an Endogenous Locus Using a Panel of Designed Zinc Finger Proteins Targeted to Accessible Chromatin Regions: Activation of Vascular Endothelial Growth Factor A," <i>Journal of Biological Chemistry</i> <u>276</u> (14):11323-11334 (2001)
	FH-1	Liu et al., "Design of Polydactyl Zinc-Finger Proteins for Unique Addressing Within Complex Genomes," <i>Proc. Natl. Acad. Sci. U.S.A.</i> <u>95</u> :5525-5530 (1997)
<i>V</i>	FI-1	Liu et al., "Transcription Factor EGR-1 Suppresses the Growth and Transformation of Human HT-1080 Fibrosarcoma Cells by Induction of Transforming Growth Factor Beta 1," <i>Proceedings of the National Academy of Science, Washington</i> <u>93</u> (21):11831-11836 (1996)

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<i>PL</i>	FJ-1	Mandel-Gutfreund et al., "Quantitative Parameters for Amino Acid-Base Interaction: Implication for Predication of Protein-DNA Binding Sites," <i>Nuc. Acids Res.</i> <u>26</u> (10):2306-2312 (1998)
	FK-1	Margolin et al., "Kruppel-Associated Boxes are Potent Transcriptional Repression Domains," <i>PNAS</i> <u>91</u> :4509-4513 (1994)
	FL-1	Mizushima et al., "pEF-BOS, a Powerful Mammilian Expression Vector," <i>Nuc. Acids. Res.</i> <u>18</u> (17):5322 (1990)
	FM-1	Nakagama et al., "Sequence and Structural Requirements for High-Affinity DNA Binding by the WT1 Gene Product," <i>Molecular and Cellular Biology</i> <u>15</u> (3):1489-1498 (1997)
	FN-1	Nardelli et al., "Zinc Finger-DNA Recognition: Analysis of Base Specificity by Site-Directed Mutagenesis," <i>Nucleic Acids Research</i> <u>20</u> (16):4137-4144 (1992)
	FO-1	Nardelli et al., "Base Sequence Discrimination by Zinc-Finger DNA-Binding Domians," <i>Nature</i> <u>349</u> :175-178 (1991)
	FP-1	Nekludova et al., "Distinctive DNA Conformation With Enlarged Major Groove is Found in Zn-Finger-DNA and Other Protein-DNA Complexes," <i>PNAS</i> <u>91</u> :6948-6952 (1994)
	FQ-1	Orkin et al., "Report and Recommendations of the Panel to Assess the NIH Investment in Research on Gene Therapy," (1995) <a href="http://www.nih.gov/news/panelrep.html">www.nih.gov/news/panelrep.html</a>
	FR-1	Pabo et al., "Systematic Analysis of Possible Hydrogen Bonds between Amino Acid Side Chains and B-form DNA," <i>J. Biomolecular Struct. Dynamic</i> <u>1</u> :1039-1049 (1983)
	FS-1	Pabo et al., "Protein-DNA Recognition," <i>Ann. Rev. Biochem.</i> <u>53</u> :293-321 (1984)
	FT-1	Pabo, C. O., "Transcription Factors: Structural Families and Principals of DNA Recognition," <i>Ann. Rev. Biochem.</i> <u>61</u> :1053-1095 (1992)
<i>V</i>	FU-1	Pavletich et al., "Crystal Structure of a Five-Finger GLI-DNA Complex: New Perspectives on Zinc Fingers," <i>Science</i> , <u>261</u> :1701-1707 (1993)

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<i>RB</i>	FV-1	Pavletich et al., "Zinc Finger-DNA Recognition: Crystal Structure of a Zif268-DNA Complex at 2.1 A," <i>Science</i> <u>252</u> :809-817 (1991)
	FW-1	Pengue et al., "Repression of Transcriptional Activity at a Distance by the Evolutionarily Conserved KRAB Domain Present in a Subfamily of Zinc Finger Proteins," <i>Nuc. Acids Res.</i> <u>22</u> (15):2908-2914 (1994)
	FX-1	Pengue et al., "Transcriptional Silencing of Human Immunodeficiency Virus Type I Long Terminal Repeat-Driven Gene Expression by the Kruppel-Associated Box Repressor Domain Targeted to the Transactivating Response Element," <i>J. Virology</i> <u>69</u> (10):6577-6580 (1995)
	FY-1	Pengue et al., "Kruppel-Associated Box-Mediated Repression of RNA Polymerase 11 Promoters is Influenced by the Arrangement of Basal Promoter Elements," <i>PNAS</i> <u>93</u> :1015-1020 (1996)
	FZ-1	Pomerantz et al., "Analysis of Homeodomain Function by Structure-Based Design of a Transcription Factor," <i>PNAS</i> <u>92</u> :9752-9756 (1995)
	GA-1	Pomerantz et al., "Structure-Based Design of Transcription Factors," <i>Science</i> <u>267</u> :93-96 (1995)
	GB-1	Pomerantz et al., "Structure-Based Design of a Dimeric Zinc Finger Protein," <i>Biochemistry</i> <u>37</u> (4):965-970 (1998)
	GC-1	Qian et al., "Two-Dimensional NMR Studies of the Zinc Finger Motif: Solution Structures and Dynamics of Mutant ZFY Domains Containing Aromatic Substitutions in the Hydrophobic Core," <i>Biochemistry</i> <u>31</u> :7463-7476 (1992)
	GD-1	Quigley et al., "Complete Androgen Insensitivity Due to Deletion of Exon C of the Androgen Receptor Gene Highlights the Functional Importance of the Second Zinc Finger of the Androgen Receptor <i>in Vivo</i> ," <i>Molecular Endocrinology</i> <u>6</u> (7):1103-1112 (1992)
<i>V</i>	GE-1	Rauscher et al., "Binding of the Wilms' Tumor Locus Zinc Finger Protein to the EGR-1 Consensus Sequence," <i>Science</i> <u>250</u> :1259-1262 (1990)

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AB3	GF-1	Ray et al., "Repressor to Activator Switch by Mutations in the First Zn Finger of the Glucocorticoid Receptor: Is Direct DNA Binding Necessary?," <i>PNAS</i> <u>88</u> :7086-7090 (1991)
	GG-1	Rebar et al., "Phage Display Methods for Selecting Zinc Finger Proteins with Novel DNA-Binding Specificities," <i>Methods in Enzymology</i> <u>267</u> :129-149 (1996)
	GH-1	Rebar et al., "Zinc Finger Phage: Affinity Selection of Fingers With New DNA-Binding Specificities," <i>Science</i> <u>263</u> :671-673 (1994)
	GI-1	Reith et al., "Cloning of the Major Histocompatibility Complex Class II Promoter Binding Protein Affected in a Hereditary Defect in Class II Gene Regulation," <i>PNAS</i> <u>86</u> :4200-4204 (1989)
	GJ-1	Rhodes et al., "Zinc Fingers: They Play a Key Part in Regulating the Activity of Genes in Many Species, From Yeast to Humans. Fewer Than 10 Years Ago No One Knew They Existed." <i>Scientific American</i> <u>268</u> :56-65 (1993)
	GK-1	Rice et al., "Inhibitors of HIV Nucleocapsid Protein Zinc Fingers as Candidates for the Treatment of AIDS," <i>Science</i> . <u>270</u> :1194-1197 (1995)
	GL-1	Rivera et al., "A Humanized System for Pharmacologic Control of Gene Expression," <i>Nature Medicine</i> <u>2</u> (9):10281032 (1996)
	GM-1	Rollins et al., "Role of TFIIB Zinc Fingers <i>In vivo</i> : Analysis of Single-Finger Function in Developing <i>Xenopus</i> Embryos," <i>Molecular Cellular Biology</i> <u>13</u> (8):4776-4783 (1993)
	GN-1	Saleh et al., "A Novel Zinc Finger Gene on Human Chromosome 1 qter That is Alternatively Spliced in Human Tissues and Cell Lines," <i>American Journal of Human Genetics</i> <u>52</u> :192-203 (1993)
	GO-1	Shi et al., "Specific DNA-RNA Hybrid Binding by Zinc Finger Proteins," <i>Science</i> <u>268</u> :282-284 (1995)
↓	GP-1	Shi et al., "DNA Unwinding Induced by Zinc Finger Protein Binding," <i>Biochemistry</i> <u>35</u> :3845-3848 (1996)

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<i>JB</i>	GQ-1	Shi et al., "A Direct Comparison of the Properties of Natural and Designed Finger Proteins," <i>Chem. &amp; Biol.</i> <u>2</u> (2):83-89 (1995)
	GR-1	Singh et al., "Molecular Cloning of an Enhancer Binding Protein: Isolation by Screening of an Expression Library with a Recognition Site DNA," <i>Cell</i> <u>52</u> :415-423 (1988)
	GS-1	Skerka et al., "Coordinate Expression and Distinct DNA-Binding Characteristics of the Four EGR-Zinc Finger Proteins in Jurkat T Lymphocytes," <i>Immunobiology</i> <u>198</u> :179-191 (1997)
	GT-1	South et al., "The Nucleocapsid Protein Isolated from HIV-1 Particles Binds Zinc and Forms Retroviral-Type Zinc Fingers," <i>Biochemistry</i> <u>29</u> :7786-7789 (1990)
	GU-1	Spengler et al., "Regulation of Apoptosis and Cell Cycle Arrest by ZZC1, A Novel Zinc finger Protein Expressed in the Pituitary Gland and the Brain," <i>EMBO Journal</i> <u>6B</u> , <i>Oxford University Press, Surrey</i> <u>16</u> (10):2814-2825 (1997)
	GV-1	Suzuki et al., "Stereochemical Basis of DNA Recognition by Zn Fingers," <i>Nuc. Acids Res.</i> <u>22</u> (16):3397-3405 (1994)
	GW-1	Suzuki et al. "DNA Recognition Code of Transcription Factors in the Helix-turn-Helix, Probe Helix, Hormone Receptor, and Zinc Finger Families," <i>PNAS</i> <u>91</u> :12357-12361 (1994)
	GX-1	Swimoff et al., "DNA-Binding Specificity of NGFI-A and Related Zinc Finger Transcription Factors," <i>Mol. Cell. Biol.</i> <u>15</u> (4):2275-2287 (1995)
	GY-1	Taylor et al., "Designing Zinc-Finger ADRI Mutants with Altered Specificity of DNA Binding to T in UASI Sequences," <i>Biochemistry</i> <u>34</u> :3222-3230 (1995)
	GZ-1	Thiesen et al., "Determination of DNA Binding Specificities of Mutated Zinc Finger Domains," <i>FEBS Letters</i> <u>283</u> (1):23-26 (1991)
<i>✓</i>	HA-1	Thiesen et al., "Amino Acid Substitutions in the SP1 Zinc Finger Domain Alter the DNA Binding Affinity to Cognate SP1 Target Site," <i>Biochem. Biophys. Res. Communications</i> <u>175</u> (1):333-338 (1991)

Examiner:

*J.S. Bruce**21 August 2003*

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In the Application of G.N. COX III et al.,

Serial No.: 09/897,844

Art Unit: 1631

Filed: July 2, 2001

Examiner: Unassigned

Title: REGULATION OF ENDOGENOUS GENE EXPRESSION IN CELLS USING ZINC FINGER PROTEINS

Exam. Init.	Ref. Desig.	Description
<i>JB</i>	HB-1	Thiesen, H. J., "From Repression Domains to Designer Zinc Finger Proteins: A Novel Strategy for Intracellular Immunization Against HIV," <i>Gene Expression</i> <u>5</u> :229-243 (1996)
<i>✓</i>	HC-1	Thukral et al., "Localization of a Minimal Binding Domain and Activation Regions in Yeast Regulatory Protein ADR1," <i>Molecular Cellular Biology</i> <u>9</u> (6):2360-2369 (1989)
<i>✓</i>	HD-1	Thukral et al., "Two Monomers of Yeast Transcription Factor ADR1 Bind a Paldromic Sequence Symmetrically to Activate ADH2 Expression," <i>Molecular Cellular Biol.</i> <u>11</u> (3):1566-1577 (1991)
<i>✓</i>	HE-1	Thukral et al., "Alanine Scanning Site-Directed Mutagenesis of the Zinc Fingers of Transcription Factor ADR1: Residues that Contact DNA and that Transactivate," <i>PNAS</i> <u>88</u> :9188-9192 (1999 1), + correction page
<i>✓</i>	HF-1	Thukral et al., "Mutations in the Zinc Fingers of ADR1 That Change the Specificity of DNA Binding and Transactivation," <i>Mol. Cell Biol.</i> <u>12</u> (6):2794-2792 (1992)
<i>✓</i>	HG-1	Vortkamp et al., "Identification of Optimized Target Sequences for the GL13 Zinc Finger Protein," <i>DNA Cell Biol.</i> <u>14</u> (7):629-634 (1995)
<i>✓</i>	HH-1	Wang et al., "Dimerization of Zinc Fingers Mediated by Peptides Evolved <i>In Vitro</i> From Random Sequences," <i>Proc. Natl. Acad. Sci. U.S.A.</i> <u>96</u> :9568-9573 (1999)
<i>✓</i>	HI-1	Webster et al., "Conversion of the E1A Cys4 Zinc Finger to a Nonfunctional His2, Cys2 Zinc Finger by a Single Point Mutation," <i>PNAS</i> <u>88</u> :9989-9993 (1991)
<i>✓</i>	HJ-1	Whyatt et al., "The Two Zinc Finger-Like Domains of GATA-1 Have Different DNA Binding Specificities," <i>EMBO J.</i> <u>12</u> (13):4993-5005 (1993)
<i>✓</i>	HK-1	Wilson et al., " <i>In Vivo</i> Mutational Analysis of the NGFI-A Zinc Fingers," <i>J. Biol. Chem.</i> <u>267</u> (6):3718-3724 (1992)
<i>✓</i>	HL-1	Witzgall et al., "The Kruppel-Associated Box-A (KRAB-A) Domain of Zinc Finger Proteins Mediates Transcriptional Repression" <i>PNAS</i> <u>91</u> :4514-4518 (1994)

Examiner: *J.B. Bures*Date Considered: *21 August 2003*

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In the Application of G.N. COX III et al.,

Serial No.: 09/897,844

Art Unit: 1631

Filed: July 2, 2001

Examiner: Unassigned

Title: REGULATION OF ENDOGENOUS GENE EXPRESSION IN CELLS USING ZINC FINGER PROTEINS

Exam. Init.	Ref. Desig.	Description
<i>jeB</i>	HM-1	Wright et al., "Expression of a Zinc Finger Gene in HTLV-1 and HTLV-II Transformed Cells," <i>Science</i> <u>248</u> :588-591 (1990)
<i>1</i>	HN-1	Wolfe et al., "Analysis of Zinc Fingers Optimized Via Phage Display: Evaluating the Utility of a Recognition Code," <i>J. Mol. Biol.</i> <u>285</u> :1917-1934 (1999)
	HO-1	Wu et al., "Building Zinc Fingers by Selection: Toward a Therapeutic Application," <i>Proc. Natl. Acad. Sci. U.S.A.</i> <u>92</u> :344-348 (1995)
	HP-1	Yang et al., "Surface Plasmon Resonance Based Kinetic Studies of Zinf Finger-DNA Interaction," <i>J. Immunol. Methods</i> <u>183</u> :175-185 (1995)
	HQ-1	Yu et al., "A Hairpin Ribozyme Inhibits Expression of Diverse Strains of Human Immunodeficiency Virus Type 1," <i>PNAS</i> <u>90</u> :6340-6344 (1993)
<i>1</i>	HR-1	Zhang et al., "Synthetic Zinc Finger Transcription Factor Action at an Endogenous Chromosomal Site. Activation of the Human Erythropoietin Gene," <i>Journal of Biological Chemistry</i> <u>275</u> (43):33850-33860 (2000)
<i>HS-1</i>	HS-1	Search of Swissprot Data Base Performed <i>not a publication</i> <u>21 August 2000</u>

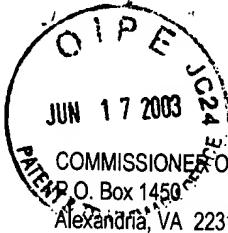
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In the Application of

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Serial No.: 09/897,844

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OTHER DOCUMENTS (including Author, Title, Date, Pertinent Pages, etc.)

Exam. Init.	Ref. Desig.	Description
<i>JB</i>	D-1	Q. Dai <i>et al.</i> (2003) "A genetically engineered plasmid encoding a zinc finger VEGF-activating transcription factor induces angiogenesis in the rabbits with hind-limb ischemia." <i>Molecular Therapy</i> 7(5): S330-S331. Abstract No. 855
<i>JB</i>	D-2	B. Johnstone <i>et al.</i> (2003) "Induction of angiogenesis in rat skeletal muscle using a designed zinc finger protein transcriptional activator targeted to Vascular Endothelial Growth factor A (VEGF-A)" <i>Molecular Therapy</i> 7(5): S235. Abstract No. 603
<i>JB</i>	D-3	X. Guan <i>et al.</i> (2002) "Heritable endogenous gene regulation in plants with designed polydactyl zinc finger transcription factors." <i>Proc. Natl. Acad. Sci. USA</i> 99(20): 13,296-13,301.
<i>JB</i>	D-4	E. Rebar <i>et al.</i> (2002) "Induction of angiogenesis in a mouse model using engineered transcription factors." <i>Nature Medicine</i> 8(12): 1427-1354.
<i>JB</i>	D-5	J.-P. Sanchez <i>et al.</i> (2002) "Regulation of gene expression in <i>Arabidopsis thaliana</i> by artificial zinc finger chimeras." <i>Plant Cell Physiol.</i> 43(12): 1465-1472.

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